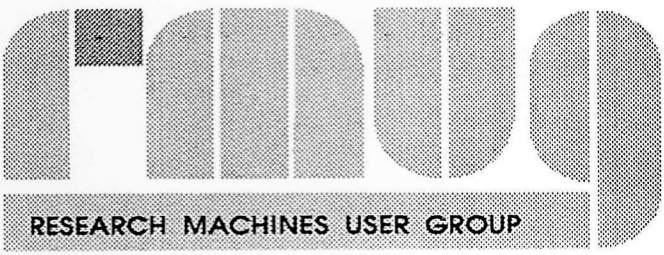
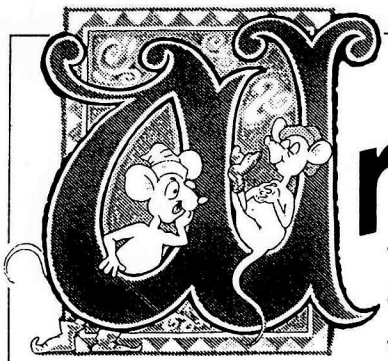
RM User

Volume 7:6

March 1993





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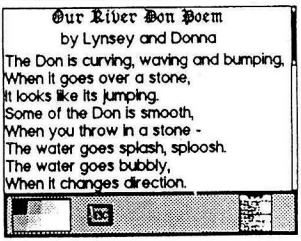
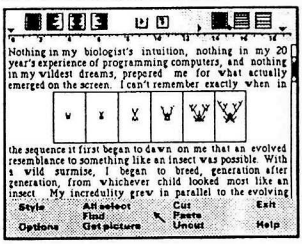
For the beginner . . .


Our River Don Poem
by Lynsey and Donna
The Don is curving, waving and bumping,
When it goes over a stone,
It looks like its jumping.
Some of the Don is smooth,
When you throw in a stone -
The water goes splash, sploosh.
The water goes bubbly,
When it changes direction.

For more advanced users . . .


Nothing in my biologist's intuition, nothing in my 20 year's experience of programming computers, and nothing in my wildest dreams, prepared me for what actually emerged on the screen. I can't remember exactly when in
the sequence it first began to dawn on me that an evolved resemblance to something like an insect was possible. With a wild surmise, I began to breed, generation after generation, from whichever child looked most like an insect. My incredulity grew in parallel to the evolving
Style
All select
Cut
Exit
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SPA

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HelpLine

The User Group exists to help its members use the computers which they have.

Many of you (about 20%) are home users of Nimbus computers and we would like to help you. Mary Mabey is a home user who has kindly agreed to let us publish her phone number; you may call her at home on 081 698 7573 if you want some advice on using your computer.

You may find that you have a problem which you feel is too trivial for Customer Support or you may have a problem with which they can't help, perhaps because you have a non-standard setup for your equipment or you are using third-party equipment. This is the time when we may be able to help.

Remember that you can telephone the User Group members in the evening or at weekends when RM is shut (and, of course, you are just bound to hit problems). Also, RM don't claim to have great knowledge of products which they don't producesuch as Excel or PageMaker. They can tell you how to install the packages on their equipment and how to get started but they cannot be expected to give you in depth support on using the packages. We, on the other hand, can. Most of the people whose phone numbers are listed at the back are using the contents of the educational software library on a daily basis. We may have met exactly the problem you have just encountered.

If you are in difficulty, please feel free to ring anybody on the Committee (numbers at the back) and you may also phone Tim Phillips on 0284 706623 (home number).

It is a great help if you are having a problem doing something using your computer if you can be next to it

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Two magazines

Your standard subscription entitles you to receive two copies of the magazine. We are hoping that you will give the spare copy to a colleague who might be interested in joining so that they can see some of what the User Group has to offer. Please let the membership secretary know if you do not want to receive a second copy (write to RMUG, Freepost, London W12 0BR or phone 081 740 5642)

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News and Editorial

You should receive this magazine shortly before the AGM; for more details see the centre pages but let me just remind you that the AGM is you chance to come along and meet other users and tell us what you would like to do. Make a space in your diary on Saturday 27 March. It promises to be a good day with input from Research Machines, Microsoft and ILECC. We are always looking for people to join the committee; if you would like to get more involved then do please let the Secretary know, especially if you can't make it to the meeting in London on 27 March. (Names and phone numbers at the back of the magazine).

Page Plus has been mentioned in these pages before. Some people are very impressed by it; I've not been so sure but that may be because I'm spoiled. I started learning desktop publishing with PageMaker and although Page Plus can do many things that PageMaker can't the basic text handling is far superior in PageMaker. This now looks set to change. Page Plus 2.0 is now available and it seems to have all the features that were missing from the first version with many more besides and it's even cheaper than before. The biggest problem with Page Plus used to be that if you were laying out something like this magazine you could import the text from a word processor and place it on the page but if you then decided to move a paragraph you had to move all the other paragraphs manually to fit; once a block of text had been placed it broke up into separate objects and no longer flowed. All that has been sorted out and text can be flowed (including auto-flow onto more than one page) and re-adjusted once it's on the page. You can also set up frames to hold text so in some ways you get the best of both ways of working. Another omission that has been corrected is the use of styles. In most word processors and desktop publishing packages it's possible to decide that you want all the body text to look the same. Instead of laboriously picking up each paragraph and setting its attributes you simply define a style and then click on this style name. If you then want to change all the body text from its current setting to something else then a quick change to the style definition and everything else follows. (For example, the magazine is mainly set in 9 point Palatino which is right justified, with a first line indent of 0.12 inches and a space after each paragraph of 0.1 inches. If I decided that it should really all be 9.5 point New Century Schoolbook and left aligned then I make just those two changes to the style definition and the whole magazine changes). Page Plus not only supports styles for text but also for graphics so you can store a particular line and fill setting in a style (I would welcome that; if I add a comment to an article I try to separate my comment by using a line but I can never remember which line type I used last time which is why they are not always the same!)

The floating toolboxes have been significantly improved (I never felt that it was very obvious what they did and they seemed really slow to use) and as with many Windows packages there is a message bar at

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the bottom of the screen which tells you what the tool you are about to click on will do. Page Plus will import from a large range of packages (including Word for Windows) and it also supports Object Linking and Embedding so any OLE server (and that includes Excel, Word and Corel Draw) can be used to insert objects into a Page Plus document. The package comes with a large range of fonts, all as True Type so they are automatically available to all other applications.

To go with Page Plus you can also buy Type Plus (which allows you to all sorts of clever manipulations of type such as fitting it to a curve, spiralling it and so on), and an art and font pack (500 images and 100 fonts). The only drawback seems to be that you must have Windows 3.1 (so it won't run on PC186 or a Net 3 Network). Page Plus is available from Serif on 0800 924925 or 0602 421502. The basic product costs £59.95 with each of the three extra packs at £19.95 or £99.95 for all 4 items (the bumper pack). There are also special prices for education; 10 sets of the bumper pack cost just £249.

You've probably heard by now of Access, Microsoft's new database package. I bought a copy of it to evaluate for storing school records and so far I'm generally pleased with it. It's very easy to set up tables and just as easy to change the format if you decide you need to do so. Having created the basic tables (in my case there were three, one each for parents, pupils and staff information) you then link them together. From here you can set up forms to show the data on screen and reports to print out the information. Both forms and reports can take their data from the basic tables but things are much more flexible if you set up a query; a query specifies which tables you want to look at, which fields should be taken from them and in what order they should be sorted. You can also select which records are to appear. A query is saved simply as the set of instructions necessary to recreate the data (or *dynaset* as Access calls it) each time it is used so there is no problem of, say, the form lists being incorrect because the pupil data table has changed. I'm quite pleased with it so far; setting up reports has been far easier than it was with Superbase and form design is a pleasure in comparison. It's reasonably quick and at least when something time consuming is happening there is a "meter" bar at the bottom of the screen which moves up towards 100% as the process takes place (although, disconcertingly, some processes go to 100% several times which gets a bit confusing!). I've read reports that there are lots of bugs in the product but those that I've read about are pretty esoteric and I don't need to worry about them. A real benefit of Access over almost every database I've used before is that it creates just one file on disc which then holds all the bits and pieces. This has two advantages. Firstly, when you come to back up the data you just have to remember to copy that one file (rather than the dozens which some packages create) and secondly it allows Access to use its own internal file naming. When you save a report you give it a name and this can be meaningful; *Form lists for Year 11*, for example because it doesn't become a DOS file so the 8.3 limit does not apply. One downside of the "container" file that Access uses is that it does not properly initialise the space which means that the Access file could contain data which you thought

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you had deleted from the disc and may be confidential. (When you delete a file all that DOS does is to mark the file as deleted and then make available the space that was being used. The data stays on the disc. If Access then comes along and asks for a block of, say, 500k then it gets a block which can contain anything. Most programs only ask for disc space when they need them and immediately write data to the space, thus blanking out what was there before. Access does not do this.)

The really good thing, from an educational point of view, about Access is the ease with which it can be used. When you want to do almost anything you can use either Access Wizards which guide you step by step through the process or you can look at cue cards. The cue cards let you ask questions; what is a query?, show me an example of a report? and so on. I've not tried using it with a class yet but I'm sure that this approach will work well with motivated pupils who want to find out how to do something but get stuck with programs like Superbase where the help is either poor or not easily found.

Living in London I get the chance to go to shows which can be interesting but probably aren't worth travelling a long distance for. The Windows Show took place at Olympia during my half term so I went along to see what was on offer. The first thing on offer was excessive heat and noise. There seems to be a need by the big manufacturers to make a big splash in order to attract visitors. Last year Word Perfect had a wild west theme (all based around the Button Bar!), this year it was Micrografx's turn to go over the top with the fancy dress. Shows like the Windows show are supposed to be more specialist than some of the general shows (such as Which Computer which will not appear any longer) but because almost every major application area is represented in Windows it's actually very general.

The All Formats Computer Fair, in contrast, is much lower key. They will be in Glasgow, Edinburgh, Brighton, Nottingham, the West Midlands, London and Bristol during April. Further information is available from Bruce Everiss on 0608 662212 and if you send an SAE to him at Maple Leaf, Stretton-on-Fosse, Moreton-in-Marsh, Gloucestershire, GL56 9QX then he will send a pack of vouchers worth £1 off the normal admission of £4. Wheelchair users are admitted free (and the last one I went to was in a venue with good wheelchair access).

Visual Basic is a programming language which goes from strength to strength. It allows you to write simple programs in a Windows environment very quickly but also allows you to write much bigger and more complex programs as well. Version 1 was quite slow mistakes were not very easy to find. Version 2 makes it all much nicer, programs run faster and are smaller. A disadvantage of Visual Basic is that you need a quite large run time dynamic link library (more than 300k) on disc to run the EXE file so a simple "Hello World program" takes up quite a lot of space but if you are writing a few programs you only need one copy of this so the actual size of your program can be quite small. Visual Basic runs happily on a network and it is priced quite

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attractively for education; a 10 user licence is about £200. Contact a Microsoft Educational dealer (such as Edhitec on 0423 871027) for details. I'd certainly be quite happy to see something like RM Pascal disappear from the Educational Software Library if it could be replaced by this.

I keep meaning to write an article on using modems; why you might want to do it and how you go about getting started but I never seem to get it finished! It's probably because I find the area so fascinating that whenever I think I'll write something I just log on somewhere, just to get some ideas to write about, and spend so long doing this that I've then not got any time to actually write! I can make one quick point, however. RM's bulletin board has moved and been much improved. It's now on 0235 826238, has 4 lines and supports speeds up to 14,400 baud. If you've never been there before and you do have a modem then do call in. There's quite a lot of stuff on there but the more people who call and either ask questions or leave answers then the better it will get. I quite often use both CIX and Compuserve; if you use either then you can write to me as srochford@cix or 70630,723 on Compuserve. If you've never tried either then they are both conferencing systems. This means that they contain a large number of conferences where people leave mesages or questions to which other users will respond. It's probably true to say that most conferences cover computer related topics but there are hundreds of non-computing topics (and even in computing there are so many things that people do with computers that you will probably find something of interest). Compuserve has been established longer (I think) and probably has slightly more areas available but, because it is American, a lot of the non-computing areas are not that useful. CIX is British and, to me, seems less well organised. Both have support from companies such as Microsoft (so if you leave a question in the Lan Manager section of Compuserve about a problem it's a quite likely that a Microsoft rep will answer it). Microsoft also have an area called Knowledge Base which contains many of the technical queries they have received about their products and the answers. The whole thing is searchable by keyword and is an excellent idea. I'd love RM to offer something like this on the Bulletin Board!

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RM Net LM Forum

The questions below are some of the commonest the User Group has come across regarding RM Net LM. We asked RM to provide some answers and this they have kindly done.

1. What is the current situation with printing when the stations and printer are in a room some way from the server?

   We are currently field-trialling a remote printing product based on Intel LAN Spool for those sites that need to use a printer at a distance from the server. LAN Spool is the only product that we are aware of that can handle workstation printers on multiple cable segments. To enhance usability, we have integrated the management of LAN Spool printer queues with the printer management included with RM Net LM. LAN Spool runs as a background task on the workstation with the remote printer attached, this workstation can continue to be used for running DOS and Windows applications.

   So far the field-trial programme has gone successfully, and we intend to have LAN Spool available as a customer-installable option in March / April. Please note that the station running LAN Spool cannot be a PC-186.

2. I need an Electronic Mail package to complete an exam course. Can you suggest a suitable product?

   We have been working closely with an external company to develop an EMail package that is closely integrated with the RM Net LM product and this is expected to be available during April. As soon as it is available, it will be shipped to existing Schools RM Net LM customers.

   If required earlier, then the Microsoft MS Mail product is recommended, although this requires separate EMail and Network users databases.

3. I have currently got a Net 3.1 network which contains a mixture of PC-186 on slow Z-Net and M Series PC-286 on fast Z-Net. What is the best way of moving to Net LM?

   The best way of moving to RM Net LM would be to convert all stations to Ethernet on Net 3.1 first, and ensure that the cabling is adequate. Once the cabling and physical layout has been set up to meet the RM Net LM guidelines then the Net 3.1 server(s) can be replaced by purchasing an Upgrade Server.

   Another method would be to convert the M-Series to Ethernet, and then move to RM Net LM. You could then upgrade the PC-186 stations to Ethernet gradually. However, we do not recommend this because the PC-186 performance under Windows will be reduced in many circumstances.

4. My network is mainly PC-186 computers. What advantage is there to me in upgrading to Net LM?

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For some tasks, RM Net LM improves the performance of Ethernet PC-186 stations. However, the RM Net LM protocol stack uses more workstation memory, and this can affect performance within the Windows environment as a lot of swapping to and from the network drive will occur.

If you are planning on extending your network with newer IBM-compatible stations such as the S-Series range, then the benefits of RM Net LM are large. If you intend to take advantage of new technology, RM Net LM is definitely recommended. If, however, no major extension is planned, then there are no significant benefits, the software you currently have will not fall apart merely because of age.

5. The courseware shipped with the network deals mainly with Excel version 2 and Word for Windows version 1. I have got M and S Series machines so I use the newer versions of these two programs. What plans are there to upgrade the courseware?
   The courseware is currently being upgraded to work with the newer versions of Excel and Word for Windows. The upgraded courseware will be available in March / April.

6. When will it be possible to upgrade to Windows 3.1, Excel 4 and PageMaker 5.0?
   Windows 3.1, Excel 4 and PageMaker 4 will be available during May/June. Upgrades to PageMaker 5.0 are still in negotiation.

7. The on-line and paper documentation supplied with RM Net LM does not always accurately reflect the actual product. What plans are there to correct this?

   There is a new and revised version of the paper documentation available in two weeks which is fully up-to-date and matches the product. Future changes will be addressed by updating complete sections and the index within the ring-binder. On-line help is also being extensively updated and will be shipped as an Update Pack to all existing customers.

8. My network has a combination of PC-186, M and S Series machines. Will I be able to run Windows 3.1?

PC-186 stations are not technically capable of running Windows 3.1. The 80186 processor cannot support the "standard" and "enhanced" modes required by Windows 3.1. However the design of RM Net LM allows different versions of Windows to be run on different stations, so your M-Series and S-Series stations will be able to run Windows 3.1, at the same time as your PC-186 stations continue to run Windows 3.0.

9. When I wanted to add extra cards to my Net 3 server I was able to look at a Customer Support publication which listed sensible combinations of cards and their interrupt settings. Is there a similar list for Net LM?
   There is a document available from Customer Support entitled 'RM Net LAN Manager - Adding Extra Network Cards To Your Server' - PN 34745.

10. When a user logs on the default is not to join a group. This means that if someone presses enter after typing their password they are

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not given the option to join a group and this causes confusion. Is it possible to change the default to group logon and, perhaps, not offer a choice of groups if the user can only join one group?

This is being changed for release in May/June. The mechanism will provide a much simpler logon screen that only has a single <Logon> button. If you are a member of a group then you will be offered the choice of logging on as a group member.

11. I am having some problems in running backups. What areas should I investigate?

Backups using Sytos Plus & DAT units

i. Before running a backup run CHKDSK.EXE twice:

-the first time to correct any errors,

- the second time to check that any errors encountered from the first pass have been corrected,

ii. Running BACKACC is a long process, typically between 30 minutes & 12 hours. If BACKACC is still running when Sytos Plus starts (if Sytos Plus is set to run on a timed setting), then Sytos Plus may get corrupt & fail.

iii. If the server hangs whilst running Sytos Plus, ensure that a user is logged on as ADMIN.

iv. If "traps" still occur then check the version of firmware fitted in the Ultrastor card against the firmware listed on page 7-5 of Insite Support Note 7 (this explains how to find the card and what to look at to find the numbers)

The software should sign on as Version V2.00, on the screen after a reset.

N.B. This must be configured with the !USC0240.CFG file version 1.02 or 1.03 (type the file to see the version number). If in doubt, delete the 24F card from its slot in the ECU and then re-add it. Never downgrade controller firmware. Never replace -008 ROM's with 007 ROM's as this combination will not work.

Backups using Eztape & Irwin units

i. Before running a backup run CHKDSK.EXE twice:

-the first time to correct any errors,

- the second time to check that any errors encountered from the first pass have been corrected,

ii. Again, running BACKACC is a long process, typically between 30 minutes & 12 hours. If BACKACC is still running when Sytos Plus starts (if Sytos Plus is set to run on a timed setting), then Sytos Plus will get corrupt & fail.

iii. In order to be able to write to the tape, the tape must be unprotected - ensure that a tap on the edge the tape has been slid across, (see the Eztape backup documentation for more information).

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Your Magazine

Many thanks to all those of you who have written articles for the magazine in the past but now it's time to re-emphasise that without you there is no magazine. I quite enjoy putting the magazine together and I'm always happy to take anything you send me and polish it up if you think that it's not quite good enough for publication but if I don't get any articles then you don't get a magazine!

I really do welcome items for the magazine from anyone. You don't have to be a great writer to send something in; send a letter or a short tip for the Hints and Tips pages, everything is welcome. If you want to phone and talk something over then please do; even if you aren't sure how to write something down then I can always include your ideas in Hints and Tips or as a plea for help.

I would be particularly pleased to hear from the people who are using RM computers at home; there are quite a lot of you out there. Some of you will be experienced at working with computers and I would be interested to know why you chose RM for home use. Others will have responded to RM's advertising, perhaps because your children use the same computers at school. How are you getting on with your new machine? Did you have any problems getting started? It doesn't matter if you still don't know the answer to the problem- this is how you'll find out - and it doesn't matter if you think that your problem was trivial; remember that there are many other people who are going to be in exactly the same position as you and will welcome the help that you can give.

If you are writing for me then the ideal is to send me a disc produced using Word or Word for Windows but I can cope with any word processor that runs on a Nimbus (I think). If what you are sending is short then a letter on good old fashioned paper is fine.

Finally, we pay for published articles at the rate of £5 per printed page (although all payments are at the Editor's

Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

Rates

Back Cover **£100** Inside Cover **£60** Full Page **£50** Half Page **£30**

Classified **£5/100 words**

These rates assume black-on-white, camera ready copy. Please avoid dot-matrix output. Typesetting is charged at cost and is additional to the above rates. Classified ads must be pre-paid; cheques payable to *RM User Group*

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New CD ROMs and Multi-Media

Mary Mabey

Like your editor, I spent hours at BETT and the Windows Show wandering around the CD-ROM stands in search of curriculum supportive resources. Those who came to the User Group weekend may remember me saying that newspapers such as the Times or Guardian, NERIS and ECCTIS are excellent value for money but that I found it difficult to think of a comparable atlas or encyclopaedia in this format. Surely all this would be changed at BETT? I expected to be dazzled by an exciting range of new titles but in the event I was able to find few which held my attention.

There is still no atlas or encyclopedia worth its asking price. The Hutchinson Multimedia Encyclopedia, based on the one volume paperback, is superficial in content and very expensive. (Single User £149 / Network Licence £395) Both on the RM network at the User Group weekend, and again on my Apricot / Novell network it has incompatible graphic drivers which result in poor definition and grainy pictures. Its great virtue is that it is British and therefore ought to be good on British history. However even my Year 7 pupils find it disappointingly lacking in detail. A search on the "Great Fire of London," is most revealing in its lack of information. It also shows up the weakness of the indexing as you only find it via "London " in the History section. It is possible to search either by topic such as History/Science, or to scan the whole index for a keyword. In some ways the size of font chosen and the shortness of the articles make them more helpful to the Primary age group than older pupils although the poor graphics rather spoil this initial advantage. Despite the American bias I much prefer the far more comprehensive Grolier Multimedia Encyclopaedia which is more expensive (£245 for a single user, £1500 for 20 users).

Another product from Attica is "Exploring Earth Sciences" which again has poor quality graphic resolution. (£195 for a single user licence). I had this on trial for a month because it seems to be ideal for Geography curriculum support. We finally decided against it because it needs a full multimedia PC to run successfully. This sounds a strange statement to make when discussing CD-ROMs but they fall into several categories. Each of the following steps takes them closer to true multimedia and each requires more additions to the host computer;

1. wholly text-based in DOS
2. wholly text-based in Windows
3. those using sound (needing soundblaster cards)
4. those with video clips (requiring video cards)
5. those needing over 4MB RAM

My CD-ROMs are networked which means that a user terminal must have the correct specification to run the programme. The Geography department has only simple workstations and the additional cost of soundblaster card, video card and speakers for several machines proved too expensive to contemplate. The alternatives were to run the programme without sound (essential commentary is provided throughout), ignore the video clips or install the programme on the MPC in the

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Resource Centre which would make it difficult to integrate the programme into normal teaching sessions. This is a problem which we will face increasingly as true multimedia programmes become the norm. Our present plan is to introduce a number of MPC stations round the College and concentrate several in the Resource Centre where they will also be used as authoring machines. This is an interim solution. Our ultimate aim is to pipe all of our CD titles directly into the teaching areas via the network. Obviously to do this we need a very generous sponsor or some very cheap MPC capable network stations!

"Earth Sciences" comes with a thick folder of information and support materials. The teaching staff considered the information on the CD good but were concerned that the user-interface was "difficult." Considerable teaching time would be needed to explain proceedures to a class before they could use it effectively. It is very easy to be less critical of CD-ROMs than books on the same subject. No librarian would buy a book which had poor indexes, outdated or superficial information, inferior graphics, or seemed overpriced so why do our critical faculties desert us when faced with the flickering wonders of the shiny silver salver?

A new title which impressed me was the Microsoft "Musical Instruments." This is a true MM/Windows title with excellent graphics and sound. Realistically priced at £49 plus VAT it is a model of well presented information. It does what no library reference book can do; it gives sound and moving images plus well presented facts and photographs. It is even possible to plot tunes and hear them! I can imagine this being a "hit" with all age groups. It was definitely the most memorable CD ROM at BETT . (Available now from Optech)

The other excellent product at BETT was "The Saxons" by Chris Jennings of RM. I can only praise it wholeheartedly for its clarity, utterly intuitive user-interface, design, clear fonts, colour, excellent graphics and content. What more can one say? There is no sound or video because this is unecessary to the content (or does someone have footage of Anglo Saxon monks chanting?) My only criticism is the subject. I know that this is Chris' choice but I really need one on the Tudors. Could he produce this next? (Available in mid April from RM at approx. £95 single user. Network POA.)

A forthcoming attraction from Microsoft is "Encarta." A true MM/Windows title based on the 29 volume Funk and Wagnall American Encyclopaedia of 1992. It's a typical sleek Microsoft product but I reserve judgment until I have a copy at home to study in depth. More about this in the summer. (Available here via Optech from mid April at £299 for a single user licence)

Microsoft currently have no network licensing policy for CD-ROM- an issue which I have taken up with them as I am committed to a policy of providing electronic resources direct to teaching areas. I am convinced that more network licences (and more individual titles!) would be sold if the pricing was something in the region of a 25%-30% mark up on the single user price. It makes sound sense to network both for security and convenience instead of teachers being forced to take a whole

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class group to the library to use a single standalone.

Another MM/Windows ROM, due for release in the summer, is "Space" by Andromeda.(0235 550296 single user £95, Network (5 users) £187) This includes sequences on the stars, planets, solar system as well as space travel. I hope to run the network trial of this product and will review it fully, later in the summer.

An interesting home-grown product is SCAMP. It stands for "Schools census and mapping package" and is a Windows database of the 1991 census information presented in Excel format plus mapping facilities. It is not cheap (£195 for a single user licence from Claymore Services, 0404 823097). Bacon's will be the London reference site for this from April so please feel free to drop in if you want to see it. (Editor's comment: "Not cheap" is always a relative term; Clamore are significantly subsidising the educational price and are apparently worried that the price is too low! £195 is a tiny fraction of the price charged to commercial users for the same data. They are worried that commercial users will obtain copies of the educational version and then Claymore will lose money)

A new CD-ROM from Bradford Technology is "The Living Body" which offers some good reference material with an intuitive interface. I was impressed by the presentation of the sections on the "eye" and "ear" which are topics that normally drive long suffering librarians to screaming point ! It **can** run on a basic 286 with 640K and VGA graphics. (This will be available from April for £199 from Alan North 081 501 1095)

"Electricity and Magnetism," also from Bradford Technology, is currently undergoing a complete re-write but will be reissued in April/ May. (single user £199, Network licence £295 from Alan North 081 501 1095)

The 1993 version of "Europe in the Round" includes a number of improvements and additions including more up to date information, climate data on 32 European capitals, addresses of MEPs, unemployment figures for 1992 etc. It is not aimed at schools but at FE although much of the information could be used in secondary Geography. Unfortunately it is based on the old hypertext product . The screens are cluttered with poor colour and old fashioned graphics. My network manager and I both felt that the product is let down by poor presentation. It failed to get on our shopping list for 1993/4.

The Daily Telegraph is now available using "Easy Search" retrieval software. I found this to be a most apt title for the user interface which is easy and powerful to use although the brown and blue colour scheme is unecessarily dreary. (It costs £199 for a site licence and is available from Optech 0252 714340)

If your school is rich enough to buy 3 newspapers this would be a good package to choose after the Times and the Guardian.

Finally, I must mention the demise of NERIS. It had failed to become self supporting by 1993 as required by the government and has actually lost many original subscribers. The DFE

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and D of E decided to remove their funding from this project. Existing subscribers will receive letters explaining the situation. I have organised a petition from librarians in the SLA and SLG. If anybody else would like to express their concern at the loss of our only educational resources database, please write to Brian Norbury, D of E, Sanctuary Buildings, Great Smith Street, Westminster, London, SW1P 3BT.

So much for a lightning tour of CD-ROMS. If you want to use a single supplier I would suggest that you phone Brady Davies at Optech 0252 714340 who can handle orders for all of these titles. If you are dying to see any of these disks please note that they will be on display at my next seminar on June 2nd entitled **"The Curriculum Potential of CD-ROM and Multimedia."**

Booking forms and details are available from me at the College. Any RMUG members are welcome to visit me at the College but this can only be done by prior arrangement and is limited to late on Friday afternoons or during school holidays.

Mary Mabey is the Resource Centre Manager at Bacon's College, Timber Pond Road, Rotherhithe, London SE16 1AG Tel: 071 237 1928 or can be contacted at home on 081 698 7573).

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SPAre a thought for NewSPAper

Stephen D. Sharrad

Not too long ago I received my standalone upgrade from my old version of NewSPAper (Version 1.5) to the latest version - Version 1.9. I was stunned by the massive improvements that SPA had made in the new version, not that I had any real complaints against the old version which I had before. SPA have really taken their trouble in care and effort to continuously improve their products - which already have a world-wide renowned reputation. Also, when the upgrade was introduced onto the M Series Rm Net at the school where I assist in the computing department, there was a shout of unanimous approval.

Version 1.9 comes with an even better Printers Workshop, allowing the scaling of Pages and Zones and batch printing - set it to print a number of pages and leave it overnight and come back in the morning to find that all your pages are printed out. This is especially good if you are using a colour printer like the Integrex which takes ages to print.

Users with more older versions of Newspa will be most radically affected - all for the good! Illustrator's Studio now allows a full 16-colour palette (although not all colour printers support this and Reporter's desk is still limited to 8 colours) and the AREA command now allows parts of a picture to be re-sized. The Cuttings library works now in a completely different way; the cuttings are now just ordinary pictures (unlike Versions 1.6 or earlier) with a library index to help you find the one you want. Illustrator's Studio now also has an "Import PCX" function so that you can load files from PC Paintbrush (although unfortunately it cuts off a bit of the PCX file). Printing from NewSPAper has also improved; users currently with Version 1.7 or earlier use .PSP files for printer specifications. Printing with these on something as simple as a Citizen 120D was not so good, only a few shades were printed - and purple came out darker than black! But now, using new Spa Printer Drivers (SPD) files printing is much better and faster. (If you are using a Citizen 120D, the best print driver is the Epson LX one if your DIP switches in the 120D are set to Epson mode (Standard). The Epson MX driver does work with shades on the 120D but the page is not printed at full width - you must specify X scale enlargement at 141%).

One problem users with floppy drives only may experience is that if you purchase the upgrade, and delete the old disks, and then use the INSTALL SINGLE B: supplied with the new version; you may find that the Library in illustrators studio does not work. Version 1.6 or earlier had a volume label of "LIBRARY-X" where X was the volume number. However, the INSTALL procedure puts the new volume label (SPA-LIBRARY) onto disks with no volume label but does not change the volume label if one already exists. The format in which Reporter's desk actually saves files has changed; the new version can load in the old type files but versions 1.7 or earlier cannot load in the new files. Also, Reporter's desk also now has fully accented and superscript characters which allows for greater flexibility in the classrooms, giving foreign language classes all they need.

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It also needs to be mentioned that NewSPAper is becoming more and more of a "harddisk or two-drive required" program. It is true that the basic program vitals will still fit on one 720K floppy but you cannot fit any pages, the Font Designer or many printer drivers, and disk speed is slow (with less than about 100K free on a disk, disk access times go way down) and therefore laborious disk changes are needed.

NewSPA has been available for the PC-186 for yonks (and for the 480z for nearly as long), and is still unbeatable as the best DTP package for schools. NewSPA's ease of use matches the versatile power of a program that is unrivalled in the educational market. While the INSTALL procedure may require care, NewSPA certainly only gets better. Using their unique reputation for initiative; SPA's Screen Saver utility is also the perfect companion to NewSPA or PaintSPA, allowing you to capture any screen in RM PC-186 mode for use with NewSPA, PaintSPA or WriteOn, and even to enlarge or scrunch screens by as much as 250%. It is a must for all establishments wishing to take screens and edit them in an easy way.

So, an upgrade to Version 1.9 of NewSPA, costing just £18.80 inc. VAT for a single standalone license is well worth it. If you don't have NewSPA but would like a user friendly yet powerful DTP package which works well on a PC186, then I cannot recommend anything but NewSPAper.

Nimbus, IBM and 480z versions (480z version does not have all features) are available from SPA at PO Box 59, Tewkesbury, GL20 6AB.

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First Impressions of Toolbox and MM Box 2

Mary Mabey

Bacon's College is embarking on a programme of "in-house" development of Multi-Media/Windows curriculum resources. Many of you will have the RM MM/Authoring package which inlcudes Toolbook. Tony Parkin of ILECC met me at BETT and suggested that I was the ideal person to write about the trials and tribulations facing the fledgling MM developer! I am currently doing this and thought that you might like to read a few "early impressions" on how easy this is for a true novice.

It was suggested that I might like to try MM Box which is a scaled down "user friendly" version of Toolbook. It cuts out any need for programming skills. All button functions are pre-programmed.

I have been sorely limited in my early progress because I do not have an MPC at home. I have been working in palest shades of grey on a laptop and taking the results to school, only to see the awful clour schemes which this has caused me to create! MM Box (c£125 **but** Educational POA from Bill Faust of UCM) is a full MM package which allows input of sound, clipart, graphics, animation, video. It comes complete with tutorial and clearly written non technical user manual.

It was originally aimed at making business promotion packages but can easily be adapted to education purposes. Obviously any scaled-down package will have limitations. I particularly wanted the facility to highlight words in the text and link them through to a definition on another page (hypertext / hotword). Such an important educational tool is vital for an educational package.Luckily this can be overcome by using the Toolbook conversion filter, loading the files into Toolbook and then creating hotwords in Toolbook. I have actually taught myself how to script this! I didn't find it easy as I have **NO** previous programming experience and I have written to UCM to suggest that this facility should be incorporated into the next upgrade. The ability to transfer files so easily to Toolbook is a real bonus but it does pre-suppose that schools will have enough money for both items of software and a qualified IT wizard/programmer on the staff!

Once I had overcome fears of working with Toolbook I went through the on-screen tutorials. I am now working simultaneously with both programs. I do not find this too confusing although there are some strange anomalies and inconsistencies such as the "toggle" between "Presentation" and "Author" modes. Why does MM BOX use F2 and Toolbook F3? As these two programmes complement each other this is an unecessary complication. Similarly why does MM Box use Presentation/Creation and Toolbook Reader/Author? I find MM Box cramps my style as I'm used to Word for Windows 2. It is irritating to be unable to use format/paragraph commands on individual lines of text and very frustrating to use CTRL **plus** Enter to start a new line. I much prefer the more sophisticated methods of Toolbook which are closer to Pagemaker and Publisher with "handles" to allow you to alter size and postition of text boxes instead of

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the cumbersome use of shift key **and** mouse in MM Box.

The biggest problem is not using the software but actually planning the finished product before you start! I can now fully appreciate the enormous amount of time which Chris Jennings spent on the Saxons. In the next few weeks I will attempt to put together a full presentation and then write about it in a later edition of the magazine.

Any authoring software requires an MPC or PC with soundblaster card, video card and speakers plus Microsoft Widows 3.1 or 3 with MM extensions. You will also need a CD-ROM drive to access sound or graphics from CD's and possibly a video camera and microphone. Additional animation sequences may require software such as "Animator Pro" so it's all pretty expensive.

Your work can be saved initially to a floppy disk but ideally you need at least a 110 MB hard disk and 4MB RAM as video and sound are memory hungry. It is possible to save your creations either so that pupils cannot alter the contents or in a format where they are able to add their own reports without deleting your painstaking efforts.

I should perhaps draw your attention to a couple of points concerning authorship. There are very strict copyright laws about scanning in photographs, works of art, the use of some clipart and any electrocopying from text based databases (newspapers, encyclopaedias etc). The Times publishes its own copyright declaration for schools using its ROMs but other publishers need to be approached individually if you intend to import graphics or text into your own work, especially if this is in an authoring package such as MM Box which may be sold to another educational establishment. This whole area is a minefield. The best advice is "don't do it if you're not sure if you should but ask the publisher first." 98% of requests will be granted -the 2% rejection factor and cost of a stamp are far cheaper than a trip to the local court!

Mary Mabey is the Resource Centre Manager at Bacon's College, Timber Pond Road, Rotherhithe, London, SE16 1AG. 071 237 1928. (Home 081 698 7573)

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Research Machines User Group
Annual General Meeting

The AGM will take place on Saturday, 27 March 1993 at the Inner London Educational Computing Centre. Please do try to get along; this is *your* opportunity to have your say and to meet other members of the Group.

The program for the day is:

10:15 - 10:45	Arrival and Coffee
10:45 - 11:30	AGM
11:30 - 12:15	Microsoft's Educational Strategy. A presentation by Mike Chase of Microsoft.
12:15 - 1:00	Chris Abbott of ILECC
1:00 - 2:00	Lunch
2:00 - 3:00	Research Machines' presentation of all that's worth knowing
3:00 - 4:00	Software fair and a chance to talk to exhibitors and other members.

There will be elections for all members of the Committee. So far the following nominations have been received:

Chair	Ian Burgess
Vice Chair	No nominations
Secretary	John Williams
Treasurer	Helen Williams
Membership Secretary	No nominations
Ordinary members	Geoff Strack, Keith Whiddon, Myfanwy Wallace, Stephen Sharrad, Glenn Taylor

If you would like to be considered for election then please let the secretary know; John may be contacted on 0789-269533 or at the address given at the back of the magazine.

The committee proposes that the membership subscription be set at £17.50 for the next year.

Please use the centre pages as a poster to advertise this event.

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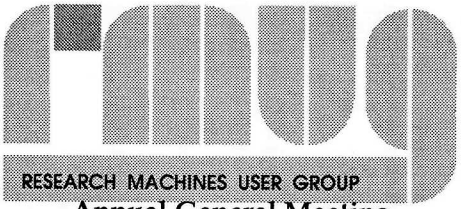

Annual General Meeting

and

Conference Day

of the

RM User Group

will be held on

Saturday 27 March 1993

at

ILECC

John Ruskin Street
London SE5 0PQ
by kind permission of the director

Programme

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Getting there:
ILECC is situated in Kennington, South London and there is ample street parking in the area. The easiest way of reaching the centre is by tube. Take the Northern Line to the Oval. From there, walk about 600 yards along Camberwell New Road to John Ruskin Street and turn left. ILECC is about 300 yards along on the right hand side.

For further information about the day phone John Williams on 0789 269533 or Steve Rochford on 081 740 5642

Micro Mart

For Sale:
PCN1 with colour monitor, mouse, Z Net interface, 1Mb or memory, IBM Utility board and SASI interface. Hard drive is fitted but seems to be faulty.

£300 or will negotiate
Contact Barry Mawer at
King George V College, Scarisbrick New Road, Southport, Merseyside, PR8 6LR

Manuals available FREE

A set of Novell Netware 2.1 manuals are available to anyone who can use them. Please contact Mr Cobden at Queen Elizabeth's School, Queens Road, Barnet, Hertfordshire, EN5 4DQ

The User Group has been given a large number of RM manuals, mainly for the PC186. If you are interested in any of these please contact Phillip Fox at 73 Parker Road, Horbury, Nr Wakefield, West Yorkshire, WF4 5JR

Windows 2, Excel 2, Word for Windows 1, Word for Dos 3 all available for just the cost of postage. Please contact Steve Rochford, Latymer Upper School, King Street, London W6 9LR
Tel: 081 741 1851

Apologies!

The advert printed for Lyndon Evans in the last issue contained an error. If you are interested in buying PC186s, 480Zs or Z Net cards for AX computers then contact Lyndon Evans on 0685 723663. Apologies to all concerned for the confusion caused.

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Technical Tips

Stephen D Sharrad

This months tech tips is going to feature mostly things about the Microsoft Disk Operating System, more frequently referred to as DOS.

Devious Dos

We have already mentioned in previous Tech Tip articles the DOS pipe facility. Another example of this is as follows. Imagine you had a file, say an Index to RMUSER. Also suppose that it was an ASCII (American Standard Code for Information Interchange) text file. Unfortunately, you want to find in it all references to "RM NET LM". If you have word-processor with a find/search option handy, this might be all very well, but if not, you can make DOS find it for you.

What you need is your index file, some spare disk space and the file FIND.EXE (a DOS program, it should be on your welcome/system disk.

(At the DOS prompt):

TYPE [NAME OF INDEX FILE] |FIND "[STRING YOU WANT TO FIND]" > [OUTPUT]

So, this line:

```
TYPE BOB.TXT | FIND "RM NET LM"
  > WHERE.DOC
```

would search the file "BOB" for ALL lines with the occurrences of "RM NET LM" and send the output to WHERE.DOC (this file can then be viewed with the DOS type command). As it searches for all occurrences this is better than a word-processor which does it one at a time. Disk space is needed by PIPE (|) operations as temporary files are created, so make sure your disk has some space and is not write-protected. (For those who know how to use the % command tails for batch files, it is not worth making a batch file to do the above as FIND only takes a literal string enclosed in quotes but not an environment or tail parameter).

Also note that to FIND, capitals and lower case make a difference, so try both.

The next DOS trick I am going to show you is how to append files in DOS. You will probably know that you can use a command like

COPY A.TXT+B.TXT C.TXT

to copy A.TXT and B.TXT put together into C.TXT. (This is called appending, gluing together if you like). However, you may also know that you can use the logical comparator arrow > to send what normally would appear on the screen from a program into a file. e.g. If you did this at the DOS prompt:

```
ECHO HELLO ALL RMUSERS OUT
  THERE >MESS.TXT
```

No message would appear on the screen but a file, Mess.Txt would be created with the message in. So what's the problem? What happens if you don't want a new file to be created, but want the message to be appended (bungned on) onto the end of an existing file? What many so-called computer boffins don't know is this: Simply change the instruction to have two arrows:

```
ECHO NOT THIS AGAIN!
  >>MESS.TXT
```

If Mess.Txt does not exist it will be created. If the above two instructions

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had been carried out, and you viewed the file by using TYPE MESS.TXT, it would appear like this:

HELLO ALL RMUSERS OUT THERE

NOT THIS AGAIN!

Doom for Qume

Those who purchased a Qume Crystalprint Laser Printer some years ago (well before Windows 3 was out) may not like to know that if they want their laserprinter to work with any Windows 3 application they may first have to obtain a Firmware upgrade to their printer costing approx 130 pounds. Phone Qume for details.

A Pentium Situation

Many of you may have heard of the new processor that is soon to be launched by Intel, the p5. The "P" actually stands for Pentium. To some of you this may be old news but the p5 is estimated for release about March. The p5 will be approximately twice as fast as the fastest currently available chip (the 486 DX233/66; ironically the 486DX2 50/100 chip is due for release just after the p5).

RM News

RM's 486SX 25Mhz is out, and so is its 486DX2/66 to accompany RM's 486DX 33. For the DX2 with a large amount of RAM and a 170MB harddisk you'll need about £1800 so this machine is not primarily aimed at schools. The 386SX and the 486SX are the machines targeted at Education for the moment and they are very good machines and the price is becoming much better - very much so when you take into account RM's after-sales service (RM SystemCare).

If you haven't seen the latest Technical Product Guide or the price list, then it is well worth taking a look. RM Net LM is being pushed foward much more now and looks like it will be used as one of RM's flag products for many years to come.

Either Net

Did you know that one of the most popular network standard - Ethernet - was never intended to be a network system with stations actually loading programs off a main server?

Ethernet was originally designed for a mail/message system, and the idea that the system should be used to actually have a fileserver being used for stations to run programs off was not thought off at the beginning of Ethernet. Now Ethernet is one of the most widely used form of Network Media (Ethernet has a transfer rate of 10MB/second) The older Z-Net system, was the only form of Network interface available for PC-186's until a short while ago when RM produced the PC-186 RM2000 interface card. Slow Z-Net only has a transfer rate of 800KB/second and fast Z-Net (which could not be used by the PC186) had a transfer rate of 2MB/second, thus the difference in performance between Z-Net and Ethernet is more than noticeable! (Especially if you only have slow Z-Net!)

That's all from Tech Tips this time. You can still contact me if you have any computing problems at all on 0491-577149. Also, I would really appreciate some feedback on what you think of tech tips, any suggestions or comments or even any things which you think would make interesting reading in Tip Techs. If you prefer to write, my address is 10 Gainsborough Hill, Henley-On-Thames, Oxon RG9 1ST.

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Least squares fit in Excel

Steve Rochford

Plotting simple graphs in Excel is easy but getting them to look the way they should is often much harder. For example, an experiment will often generate data which is expected to give a straight line graph but, when the data is plotted, the line is not perfectly straight. Excel offers a way of calculating the best fit line for the data set; it actually returns the slope and intercept for the straight line which best represents the data.

Enter your known x data in one column (eg A), y data in another column (eg B) and leave a third column blank (eg C). At the top of the next column (cell D1), enter the formula:

=INDEX(LINEST(*yvals*,*xvals*),1)

where *yvals* is entered by highlighting the y values (numbers in column B in the example) and *xvals* is similarly the set of x values (column A in the example). In the cell underneath this, enter the formula:

=INDEX(LINEST(*yvals*,*xvals*),2)

entering *xvals* and *yvals* as before.

The first value is the slope for the data (m), the second is the intercept (c). Given that

y=mx+c

we can fill in a formula in column C to take the known x values and work out a "correct" y value.

Click in cell C1	*this is where the first y value goes*
press =	*to start entering a formula*
click on cell D1	*this is the slope*
press F4	*so that this is treated as an absolute reference*
press *	*to show multiplication*
click on cell A1	*by the x value*
press +	*to add the intercept*
click on cell D2	*which is here*
press F4	*to treat this as an absolute reference*
press Enter	*to complete the formula*

highlight cells in column C to match the number of points

select Edit Fill Down to calculate all the points

Highlight all the data in columns A to C and then plot a chart from it. Use Format Patterns to change the line for the actual points to none and put a suitable line to join the calculated points to show the best fit.

If you are interested, LINEST is a function which returns an array of information about the data in the y and x values given to it. The INDEX function is used to extract particular elements from this array; the first element is the slope of the graph, the second is the intercept.

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RM Net LM - some useful information

Steve Rochford

I recently attended RM's advanced support course for RM Net LM; some of the information given below comes from that, some is culled from my own experiments. The most important point to make is that Lan Manager is a very complex system in which lots of parts interact. Don't try changing things while the network is in use (or half an hour before it will be!) and make sure that you understand what you are about to do and how you will get back to a working system if you end up with something not behaving as it should.

Printing

Printing is one of those areas that can cause problems even on a standalone computer; when you go to a network the system gets much more complex. With Net LM the starting point will always be Printer Manager on a station. This is now a reasonably stable product and the help is pretty good. Having got printers set up and working I found two problems. The first was that some printers were putting out a blank page in between every job and the second was that I wanted some way of knowing how much use was being made of the printer by each user. At the moment I am considering looking at usage over short periods of time. If a user seems to be making excessive use of the printer then I want evidence from them that they are producing good work rather than just printing posters to decorate their bedrooms! The first solution came from Customer Support; the second was prompted by the course.

On the server a print manager program is always running; you've probably used it to hold or delete print jobs or to temporarily pause a queue. The Setup menu is the key to sorting out the blank page. From this menu choose Printers and then choose the printer you want to change from the list which appears. Click Change and then Pick Printer properties from the next screen and make sure that the Form Feed Control is set to None. Click Enter then Change and finally OK to make this happen.

That was quite easy for the first printer I tried but the Deskjet 500 caused more problems; Print Manager gave me an error message about not being able to find the printer driver and wouldn't let me select it. It turns out that the name of the printer is too long and OS/2 only picks up the first few characters of the name and then looks for a printer called this. It isn't there and hence the failure. The solution lies in editing OEMSETUP.INF (in U:\W30\SYSTEM - make sure you take a backup of it first) to change the name of the printer. (Look at the support notes for adding a new printer to Windows to find out how to do this. Basically, what you do is remove any queues which use the printer, delete the printer from any ports to which it is connected, edit OEMSETUP.INF to shorten the name and then re-create the queues with the shorter name. It is **very** important that you do it in this order; if you change the printer name first then you won't be able to delete the queue). Once this has been done, you can use OS/2 print manager to correct the form feed. The other printer driver which causes problems is the Apple LaserWriter IINT/IINTX. This isn't listed in the OEM file (it's provided as standard with Windows) so you edit the file called SETUP.INF (also in

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U:\W30\SYSTEM), changing the name of the printer to something shorter.

Printer auditing was a bit more of a problem. Lan Manager can be set up to audit all sorts of things; as delivered by RM it only records log ons and log offs and it stores this information in a file which is far too small. The low size is set so that you can use Notepad to view the file; I have changed the size of my audit log to 250k (it was 24k). I've never let it grow anywhere near that big because I clear it regularly but at least I know I won't run out of room if I don't get a chance to look at it on any one day. Write can be used instead of Notepad to view the file; if you want to experiment then you could change the MTSL which lets you look at the audit log so that it loads Write in place of Notepad but do remember to take a copy of the file **before** you start.

That's sorted out where the data will be stored; now to actually collect the data. First of all, create any printer queues you want to audit using Printer Manager on a station then go to the server and log on. I am going to use PSLASER as the name of my queue; you should substitute the name of your queue. Type the following commands.

```
NET ACCESS \PRINT\NAME /ADD
  USERS:C
NET ACCESS \PRINT\PSLASER /
  SUCCESS:WRITE
CD \LANMAN
COPY LANMAN.INI LANMAN.XXX
E \LANMAN\LANMAN.INI
```

The last line takes you into the OS/2 editor with the INI file loaded. Find the line which says

```
auditing= goodnetlogon,
  badnetlogon
```

and add the word resource to the end; it now says:

```
auditing = goodnetlogon,
  badnetlogon, resource.
```

Save the file (if you are asked for a file type then set it to plain text) and quit from E. Now stop and restart the server, log on at a station and try to print a file to the audited printer. At the server, log back on and type NET AUDIT /REVERSE (get ready to hit the pause key!) The first line shown should tell you that the print queue was accessed by you.

What have you done? The first line tells the system to audit write accesses to the named printer queue. The next line allows the group called USERS to create print files (USERS includes everybody). Then the LANMAN.INI file is backed up, just in case you make a mistake, and then it is edited. It is, of course, possible to use a group other than USERS in the second ACCESS line. If you have a printer that you only want to be used by the Staff, for example, then make them members of a group called STAFF and put this group name in place of USERS. Any one who is not a member of this group will now not be able to print to this printer. If you are not interested in the logon details then you might like to get rid of the goodnetlogon and badnetlogon items.

When I re-booted my server everything worked but the audit file seemed to contain lots of information that I didn't want; in particular my Sytos backup seemed to be recording lots of file accesses which were not there before. The problem is that the system, as delivered, is set to record accesses to the root directory once you enable resource logging. Any directories created immediately underneath this will also acquire the same rights; Sytos installs in a directory

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directly off the root, as does Spool+ and the directories created by Updates 2 and 3 to store the old versions of the files. Typing

```
NET ACCESS C:\SPOOLDIR /
  SUCESSSS:NONE
```

gets rid of this for the Spool + directories. Repeat the command for any other directory which you have created off the root.

The new version of Applications Manager allows you to specify the maximum number of users for a piece of software. If you have, say, 5 licences and a sixth user logs on then the MTSL script will give them a message telling them that too many copies are being used and will not let them run it. If you want to know how many times this is happening then you can enable *baduse* auditing by adding baduse to the list of audited items in LANMAN.INI. This records when a NET USE command is refused. Each time someone tries to use the software and access is denied because too many copies are in use Net LM will log this in the audit trail. This gives you the information you need to find out which pieces of software need more licences buying. One problem with manually editing LANMAN.INI is that if ever you need to run Setup (perhaps to add a new ethernet card) then it will remove your changes. To prevent this being a problem, make sure that you write down exactly which lines you changed; I have a copy of the file with the sections changed highlighted so that I can easily make the same changes again if necessary.

Removing PC186 support

There is a temptation if you have a network which has no PC186s to delete all the files which seem to be for DOS 3. This is possible but you should not just delete the files without telling Net LM that they are no longer there and you should not delete the directories because future updates may try to install software there and this will fail if the directories are missing. The file RMBOOT.INI starts with lines similar to these

```
[OpSys]
;dos310=
dos500=
;[dos310]
;path=c:\lanman\rmnet\wksta\rmboot\dos310
..
;virtualdisk=system
```

Make sure you back up the file before you edit it and then, with no-one using the system, log on at the server and type NET PAUSE RMBOOT then edit the file to put a semi-colon at the start of all the lines referring to DOS310 as shown above. Save the file (again, it's plain text) and then type NET CONT RMBOOT.

Finding files

On my RM Net servers I have always used RMTREE to find a file if I didn't know where it was; typing RMTREE M:\filename.ext will search the whole disc for the file. You can use RMTREE on a station on Net LM in the same way but you can't use it on the server because it's not an OS/2 program. Instead, you can use ATTRIB. Typing ATTRIB C:\filename.ext /S will search the whole disc for the file specified (and you can use wildcards; ATTRIB C:*.INI /S finds all INI files). It's quite quick (even on my server which has something like 20,000 files on it).

Station Startup Programs

Station Manager allows you to load programs for a specific station either before or after station startup. "Startup" is basically the point at which the station specifically connects to a server which may not be its boot server and loads

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the redirector software (NETWKSTA.EXE). This is a big program and will normally load into high memory if it can. It will not be able to do so if you have hiloaded too many extra device drivers in CONFIG.SYS or you have tried to hiload programs before station startup. In general, you should load programs after station startup. There may be insufficient high memory left for them but they are likely to be much smaller than the redirector so the overall effect is still to give you more free memory.

Windows startup

When Windows is started on a standalone machine it reads the various .INI files from the directory in which it finds WIN.COM. On RM Net LM RMWIN.COM has to create these files before Windows can start. It does this by pulling in bits from various places and then (eventually) runs the RMWNA program which asks for your id. Once this has been established, the rest of the INI files are built, depending on what kind of a user you are. This is normally fine but there are some things which cannot be set by making changes to the user's WIN.INI because Windows needs them earlier on. An example is the desktop icon spacing and wallpaper. I tried editing the files DEFAULT.WNI and CD.RMI (which form the core of WIN.INI for a standard VGA colour machine) but got nowhere. Eventually on the course I found that you actually edit DEFVGA.SYI (or appropriate SYI file for your computer) and add the following lines at the end:

[RMExt.Win.Desktop]

IconSpacing=60

(or whatever number you want for the spacing). The syntax is to put RMExt followed by the name of the INI file to be changed and then the name of the section (which is found in square brackets if you look at WIN.INI). Under this you put whatever needs to go into the INI file.

Backups

Net LM servers now all come with DAT drives. They are easy to use (one tape can easily hold the whole contents of the server's disc; a 2Gb tape could backup 3 servers with 650Mb drives) but using Sytos seems full of problems. The support notes have gone someway to explaining the best way to use it but haven't really covered scheduled backups (except to say that you can't do it with an AT command!) I use a set of AT commands to log on and log off an ADMIN user and then use the Sytos scheduler to make sure that backup takes place. I have created a special user of type ADMIN called BKADMIN with password set to SECRET (I didn't really use this password and neither should you!) using User Manager. In Net Admin on the server I have specified that this user can only log on at the station called SERVERX1 (if you have multiple servers then you must allow this user to log on at all of them) and only log on between 7.00pm and 7.00am. The AT commands are:

```
AT 19:00 /every M,T,W,Th,F
  net logon bkadmin secret /y
AT 19:05 /every M,T,W,Th,F
  chkdsk
AT 21:00 /every M,T,W,Th,F
  backacc c:\ /s
AT 21:00 /every M,T,W,Th,F
  copy
  c:\lanman\accounts\rm.acc
  c:\lanman\accounts\rmacc.bkp
AT 06:00 /every M,T,W,Th,F
  net logoff /y
```


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The first and last commands log on and logoff the administrator; /y so that any questions that are asked are answered Yes (for example, if you have left a user logged on at the server then you are asked if you want to log off first; fail to say yes and nothing happens in an AT file). I'm not sure if I really need to run CHKDSK; it can't fix the "problems" that it finds because many of them are not really problems but just open files which are in use by the operating system, but it doesn't cause any problems so I leave it there. BACKACC copies the accounts database to a backup file and then backs up the access control list; this takes a long time (about 2½ hours on my server).

Edit the file C:\STARTUP.CMD on the server and add the line

```
start /pm c:\syplus\syplus /i
```

to start Sytos program whenever the server is re-started. (/pm tells OS/s that the program being started is a Presentation Manager program and /i tells Sytos simply to install the scheduler). Sytos must be able to write to its journal file whenever it starts (you get an error message about insufficient files being available if it can't do this) and to permit this without having a user logged on you must change the permissions on a set of directories. Run Net Admin and change the permissions for the directory C:\SYPLUS\SYFILES to give RWXCDA to Local and then choose Permit Tree. (Local is the system itself; with no user logged on). Now run Sytos and schedule a full backup and compare for midnight every day.

If you have multiple servers then you can add AT commands which make connections to the other servers:

```
AT 23:45 /every M,T,W,Th,F net
  use D: \\serverx2\C$

AT 23:45 /every M,T,W,Th,F net
  use E: \\serverx3\C$
```

Change the Sytos procedure that you have scheduled to do a full backup and compare of drives C: and D: and install suitable AT commands on the other servers to log on an admin user and run BACKACC.

Making changes at the server

Net Admin offers the opportunity to make many changes to user accounts. Which ones can you use? In general, none of them. In order to provide some of the extra facilities for group management and Windows specific functions, RM have added an extra file (RM.ACC) which stores these details and supplements the information held in NET.ACC. If you make changes using NET ADMIN then they will not be made in RM.ACC and this could cause problems. It is safe, however, to **change** things which are only stored in NET.ACC; changing the disc space allocation or a password, for example. An option I wanted to use was the password expiration. Lan Manager has the option of forcing users to change their password after (say) 30 days. You **must not** enable this option. If you do then two things will happen. Firstly, stations will fail to startup (because @STATION will have had its password changed) and secondly users will not be able to log on (because their passwords will need changing but RM's log on screen only allows password changing once you have logged on and you can't log on because your password has changed!)

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Running Email on RM Net LM

Keith Whiddon

I bought Net LM back in May last year. RM had advertised that a full electronic mail package was included. I would not only like (and have paid for!) an Email package, but it is a requirement of RSA and TVEE entitlement, that students should have experience of using Email. The latest news from RM is that their Email package for LM is due out in March - nearly a whole year after I paid for it!!

Sick of waiting for it and wondering which would come sooner - RM's Email or Norman Lamont's economic recovery - a sixth form student kindly gave me a copy of "Network Email", by Ivory Tower. Pleased to read that this was **public domain "freeware"**, I set out to stick it on LM.

I have given a disk containing the software along with my MTSL and registration files to the RMUG library which you may like to try while you wait for RM's version.

"Network Email" creates a new sub-directory for ***every*** registered user - seems excessive, but doesn't take up much room. It is easy to write a message and send it to an individual, or a group of recipients. You can even append a file to a message. If the recipient is also using the Email program, a message will pop up and mail will appear in their mail icon! It is possible to reply to messages, as well as save, delete or print them. You could therefore use the program as a chat/conference line. If the recipient is not on the network, when they next enter the Email program, any new messages become available.

It seems a very nice little program to me, with two or three minor reservations noted to date. It is rather slow to load and run and uses rather a lot of memory. It must be closed down **before** logging off the network. If not, then the logoff button keeps reappearing! **Note that it requires Windows Standard mode as a minimum and therefore won't run on a 186.**

Place the files in the following directories:

Program	Directory
EMAIL.EXE	P:\LIB\EMAIL
EMAIL.WRI	P:\LIB\EMAIL
(or Admin's N: for reference)	
EMAIL.INI	P:\LIB\EMAIL
VBRUN100.DLL	P:\LIB\EMAIL ***and*** U:\W30
EMAILRUN.EXE	P:\APPSTART
EMAILREG.EXE	P:\APPSTART

"Network Email" is written in Visual Basic 1 and therefore requires that the VBRUN100.DLL run-time file is copied to the Windows directory (U:\W30).

In addition, it is necessary to grant all potential users R,W,C,D access to the P:\LIB\EMAIL directory. You could use Net Admin at the server, but it is quicker to type in;

```
NET ACCESS
 C:\PUBLIC\LIB\EMAIL /CHANGE
 USERS:RWCD
```
at the server.

If you run the Email program on its own, it prompts the user for an ID, (which it uses to make a sub-directory under P:\LIB\EMAIL), and then for a user name. As the username appears in the list of recipients, it is vital that

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the user can be identified by it.

I decided that, in the interests of an efficient and non-pornographic system, it would be a good idea to make the Email username the same as the unique Net LM username. This was easily achieved by making use of the "logonname" MTSL function. The logonname could be passed as a parameter to the Email program which would create a file containing the username and a mail sub-directory. This works fine for users with usernames of less than nine characters, but unfortunately, the Email program does not error trap your attempts to create illegal length files, or directories and crashes!

I couldn't think of a way of making MTSL reduce the logonname to eight characters, so I therefore resorted to a devious fix. I wrote a simple Visual Basic program and an INI file to do the job!

The EMAILRUN.EXE MTSL firstschecks for the existence of the EMAIL.INI file in the user's area. If the file doesn't exist (e.g. the first time the program is used) then an environment variable (EMAIL) is set to "UNREG". The EMAIL.INI file is then copied from P: and the user's logonname is called. This is then written to the appropriate line in the newly copied EMAIL.INI file. My Visual Basic program, EMAILREG.EXE is then called. This simply gets the logonname from the INI file, chops it down to eight characters if necessary and sticks it back again. In addition, it creates the Email user name file (.USR) and sub-directory, based on the truncated logonname The user name file itself, contains the full logonname, so that it makes sense in the list of recipients. The Email program is then called with the logonname passed as a parameter. As the .USR file and directory now exist, the user is registered.

On subsequent occasions, the MTSL skips the registration process, reads the logonname from the EMAIL.INI file and passes this to the Email program.

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If you need an EMail program now then this looks like a good idea. It doesn't have some of the flash facilities that some packages have but it does work, it is here now and it's free. My only worry about it is that it may not be very secure (it's probably possible for users to read someone else's mail) but if you are simply interested in teaching the basics of EMail then this doesn't really matter.

One interesting point is the use of Drive P for storing the mail messages. If you started with Net 3 then you will think of the public drive as being read-only and it behaves like that in Net LM normally for a user because the access rights for the whole drive are set that way. It's possible, however, to change the access rights for a subdirectory tree by using the Net Access command on the server. This has no affect on the rest of the public area and makes it very easy to provide drives which can be written to.

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Hints and Tips

Custom number formats in Excel

When you use the Format Number option in Excel you may find that the number type you are looking for is not there; for example, the simple number formats offer you 0 and 0.00 (which respectively give you no and two decimal places) but there is no option for showing one place of decimals. This does not have to be a problem; all you do is click in the format box and type the format you want - type 0.0 if you want the numbers shown to one place of decimals. You can also include text. If you are storing masses in kilograms, for example, then you could type 0.000kg as the format. This will force Excel to show the number to 3 places of decimals with at least one digit in front of the point and the letters kg after the number. If you want to record distances in feet and inches then you could put the numbers in adjacent columns, the first formatted as 0' and the second as 0" but, as they say, it is left as an exercise for the reader to find out how to sum columns of numbers in these units! The best way to find out what you can do is to experiment. Note that when you go back to the Format Number dialogue you will see the text like kg shown as \k\g. This is Excel's way of showing that the characters are to be printed literally and are not there to represent something else (in the way that dd stands for day or mmm stands for month)

Updating groups for unrestricted users in Windows

Net 3.1 provides two basic kinds of users who can run Windows; restricted and unrestricted. The batch file WINMNG is provided for the Network Manager to create or update the Windows settings for restricted groups but unrestricted groups cannot be updated in this way. If you want to be able to update the programs available in a program manager group for an unrestricted user then you can either manually copy the new .GRP files to their directory (tedious if you have a lot of users) or you can devise a strategy to make things easier. If you tell the unrestricted users that they should never try to change the contents of one group (call it special, say) then you can run WINMNG for GroupU (or whatever your Windows group is called) and change the contents of the special program manager group. If you now add a line to the WIN.BAT file to copy this into their directory then you will make sure that they are always up to date. The extra line should say:

```
if not exist
  p:\win\rmnet\%group%\restrict
  then copy
  p:\win\rmnet\%group%\special.grp
  %windir%
```

and can go straight before line which starts RMNETWIN. This simply checks to see if a file called restrict is present in the Windows group directory. If it isn't then this is an unrestricted user so the file is copied.

Listing the fields present in a Superbase file

Superbase has a rather unusual menu set up; one of the things that's not obvious is how you find out what fields you have in a file and how many records are there. If you choose the Utilities Menu and then choose Status File you get a listing of information about the file. You can't print it from here, however, you need

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to go to the File menu, choose Print and then choose Status File to get a listing of fields. One of the most irritating things about Superbase is the way you set up a page for reports. You don't specify the report size for each report but instead for everything that is printed. You do it in the Set Page Setup and Set Printer Setup dialogues. In the first you choose the margins and font to be used (no option to use a bigger print for headings; it's all one size but you can use bold or italics for emphasis). In the second you specify the printer but you also choose the actual paper size and whether it is portrait or landscape.

If you want to make changes to the setup of Superbase for a network user then you do it using the WINMNG program; eg type WINMNG GROUPR to edit the settings for GROUPR and then start Superbase. Make any changes that you need and quit from Superbase. It writes changes to WIN.INI and WINMNG makes sure that these are stored properly.

Changing field types in Superbase is one of the areas that I find confusing. If you are setting up a new file and have just added a field and then realise that you want to change the field type for it then you must click on the field in the list, choose its type and then click Clear. If you don't do this then sometimes, when you move on to another field, Superbase just seems to get confused and you end up changing the field type for the wrong field. The most irritating thing about File Modify is that it will let you set up a new field and then quit without warning you that you have forgotten to add it to the list. It's not that important when it's a simple field but if it's a calculated field then it really is a pain.

Superbase can look up data from one file in another. For example, we store information about our pupils in a Superbase file and we use a code for the primary school they came from. I wanted to be able to show the actual name of the school on screen, rather than just the code, so I created a separate file containing the codes and the full names of the school. This file is called SCHOOL and the two fields are called SCODE and SNAME; the corresponding fields in the pupil file are called PCODE and PNAME. PNAME is then defined as a calculated field with the formula:

```
LOOKUP (pcode,scode.school) ?
  sname.school:"unknown"
```

It looks horrific but what it does is quite simple. The first part looks in the school file for the code stored in the pupil file and returns either true or false. If it returns true then the field in the pupil file is filled with the contents of the sname field from the school file, otherwise the word unknown is filled in. For it to work the two code fields must both be indexed (a unique index in the school file, a normal index in the pupil file).

PageMaker fonts

PageMaker does not really offer a wide choice of fonts unless you have something like a PostScript laser printer or you are running Windows 3.1 with some extra TrueType fonts. The set of fonts it offers depends on which printer you are using and what you should always do when you use PageMaker is choose Printer Setup right at the start and select the printer you will eventually use to print out the work. If you don't do this then when you do choose the printer for printing you will be asked if you want to recompose the publication for the new printer. If the two printers

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are significantly different then the result will be a mess. If you want to print a draft on a dot matrix and the final product on a laser then what you have to do is select the laser at the start and compose the work. When you are ready to print the draft, you select it from Printer Setup and say No when asked to recompose. The printout will not be very good (because PageMaker will try and simulate fonts) but the spacing will be about right and you can at least check spelling and basic layout. When you are ready to make further changes, swap back to the laser printer, again not allowing PageMaker to recompose.

PageMaker has a facility to import graphics, either by pasting them from the clipboard or by using the File Place choice from the menu. The former is quicker if you have drawn a small picture in, for example, Paintbrush. Simply select it and do an Edit Copy. Swap to PageMaker (closing Paintbrush first if you are on a machine with little memory) and then do an Edit Paste. The disadvantages with this are that you cannot paste very large pictures (I think that the limit is 64k), the picture is generally pasted at screen resolution (not much of a problem for many programs) and a colour picture may come across as black and white. When you use the File Place command you can only bring in files which are in formats which PageMaker recognises; PCX, WMF amd TIFF are supported but BMP is not. If you are importing a TIFF picture (from a scanner, for example, then PageMaker actually brings in the part of the file that shows a rough image on screen but leaves on the disc the main part of the file. This will cause no problems until you delete or move the original scanned image or copy the .PM3 file onto disc to move to another computer. When you next try to open the publication you will be warned that the TIFF file is missing and asked to locate it or ignore the error. If you ignore it then when you print the file you will find that you get a very coarse picture. Note also that the TIFF specification keeps changing to allow for things like colour. It's backwards compatible inasmuch as a new TIFF reader will read the older files but older readers won't be able to read the new file. If you have a scanner and find that the files it saves can't be read by PageMaker then look for an option called something like Uncompressed TIFF or save the file as a PCX. If you've got some files already saved and can't re-scan them then another alternative is Paint Shop Pro (see below).

Paint Shop Pro

This is an image manipulation program which allows you to take bitmap pictures from a variety of sources and change them into other formats. It also allows you to crop parts of the picture, resize it, convert to black and white from colour (or vice versa) and generally fiddle with images. It can also capture parts of the screen; excellent if you want to include things like "Click on the pointer tool" in a worksheet. I find it invaluable. It's a shareware program and costs £39 from The Thompson Partnership, Church Croft, Bramshall, UTTOXETER, Staffs ST14 5DE; Tel: 0889 564601.

Word for Windows

Version 2 of Word makes placing pictures a lot easier than version 1 but if you've only got version 1 then this is how you do it.

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Turn on "View Preferences Paragraph Marks". Type a Paragraph Mark (carriage return) somewhere on the page where you want the picture. Put the cursor/insertion point in front of the paragraph mark. Click on Insert Picture and insert it. Click on Format Position. Click on both of the "Page" buttons. Click Preview and DON'T PANIC! Click Boundaries. You'll see a gray box around your picture. Click on the edge of the box and drag the picture to wherever you want it. Double-check the "flow" by clicking on Boundaries again. Click on Utilities then Repaginate to see how the text flows. When you're done, click Cancel.

Do the rest of your work with View Page ON (click View, and see if there's a check mark in front of Page; if not, click Page). You'll see the text flow around your picture.

Once you get it working, leave the paragraph mark that's next to the picture alone. Don't type any text next to it. The reason: WinWord positions paragraphs, not pictures - so all your positioning information is attached to the paragraph mark, not the picture.

(In Word 2 you insert the picture, highlight it and then insert a frame which will automatically surround the picture. You then choose Format Frame and choose the Text Wrapping Around option).

Another problem with Word 1 is that it prints blank fields when doing a Print Merge. Suppose that you are not sure if the field "Address2" will be empty or not. Include the fields like this:

```
{name}
{Address1}
{if {Address2}<>"" "{Address2}

"}{city}, {state} {zip}
```

The trick is to include a paragraph mark inside the quote, after {Address2}. (So what you type looks *exactly* like it is shown; with a single Enter after the second {address2}). Word takes you quite literally, and will only "print" the paragraph mark if {Address2} is not null.

Windows Draw

If you have PC186s and want to use a vector based drawing program then contact RM for information about this old version of the Micrografx program. It was originally released for Windows 2 but it now works with Windows 3. It doesn't have some of the flash features of newer programs but it works adequately (and the pictures it saves can be directly imported into PageMaker).

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Stop DOSsing me around!

Stephen D. Sharrad

What follows is a description of how to follow a logical test sequence when things don't quite go as you expect (..or not - read on to find out more!)

I received a firmware upgrade for my PC186 and I soon went about fitting it. My old firmware was version 1.32D so I don't really think that there is much difference except perhaps for aesthetic reasons. (Both 1.32D and 1.32F contain the IBM mode firmware/CGA character sets. 1.32C or below is not recommended for using with SETPC and 1.20W is the minimum for the IBMulator.) I don't know if you know the internal workings of a PC186 (neither do I?) but the firmware slots (as a certain law states) were in about the most unreachable part of the machine.

Okay, lid off, parallel port, user port, disk controller, RAM board, disk drive and chassis, all out and yet, I still couldn't get to the stupid sockets which were sitting there laughing at me. As it, happened, I'd left my bionic fingers at school with my brain so the power supply had to come off. Unfortunately, The power plug which went from the PSU to the mainboard refused to come off and so another 10 minutes of infuriating nibbly manoeuvres.

Ah Ha! Victory over the PSU as it was finally removed, I went about removing the old chips. Yes, out they came one by one. Fitted the new firmware chips and I thought - "Yes - Success is sweet - Lead on Macduff." So I went merrily about putting it all back together again and turned on the machine.

Yes - Firmware 1.32F running fine. Now for a nice cuppa. Okay, my brother, not satisfied that I'd done the operation without breaking something decided to test the machine out.

Ooops! Shock and Horror! The mouse did not appear to work! My brother's program which tests the machine like a haircomb (do you know anyone twelve hundred feet tall and with a head the size of a football pitch ?) indicated that the left mouse button did not work. Hee Hee! There sat my brother smiling gleefully at me! Yes! Now he had the chance to belt me and gain ready access to my cheque book! (Not that it would have done any good, readers).

Well, now, my nice warm cuppa had turned into porridge and the spoon was standing up in it, but I took the PC186 to bits and replaced the unmentionable firmware chips with the old ones again. I put the machine back together (I don't think that there were any bits left over; not a recommended thing when dealing with computer equipment) and the mouse still did not work! So the next day I took the mouse into school to test it. Ah! Relief. The mouse did not work at school and a mouse brought home from school worked. Wow! My mouse had only 14 days remaining of its warranty so I thought myself fortunate.

I then took my PC186 back to bits again (I think it must have got quite fed up of this) and replaced the horrid firmware chips with the new ones again. Ah. Paradise at last! Now for that cuppa! Finished.

I arrive home only to find another problem which seemed to prove conclusively that are machine had been upgraded to a non-functioning tin-

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can. NewSPA did not work! "Memory Allocation Error." One quick phone call to RM made me realise the possibility that my machine might have to be returned to RM for repairs.

I then tried the machine from a cold-boot and ran NewSPA only to find that it worked like greased lightning. What had been wrong? Was it our machine? My brother and I then realised that we had been using the ANIMATE.EXT extension to RM Basic before loading Newspa. Could this have done it? Yes. Sometimes, if you do a lot of work with ANIMATE you can muck up Illustrators studio.

That was, however, until the next day as I received my own copy of PC Paintbrush for the PC186. I quite like PC Paintbrush (I think that it is one of the better programs for the PC186 if you get to know how to use it properly) and I eagerly started to get re-acquainted with it. Oh dear. What is this? Do a zoom-in and then zoom back out again the machine crashed straight back to DOS with a "Divide Overflow" error. This surly meant that my machine was bust! What else could it be? I phoned RM and some nice person said "We'll probably have to take your mcahine in for repairs - It sounds like the CPU on the mainboard has been damaged.) That really made my day. Just to check that my working copy of the master disk was not corrupt I ran PC Paint off the master disk only to find it still didn't work? What would I do without my poor PC186? (Sell it as a piece of genuine old England?)

As problems were now becoming a regular occurrence, I took PC Paint to school. I logged on the network, and ran it off the servers floppy drive. Yes. You guessed it. It did not work. I ran it off the master disk. It did not work? Could it be? Yes. I borrowed a copy of PC Paint from school and ran it at home. Zoom-In, zoom-out. It worked! So. It was my master disk of PC Paint that was corrupted. I did a file-compare (with the DOS utility FC) and found that a sizeable chunk each of the two EXE files, PBrush4 and Pbrush16 were corrupted - just written over with zero's. (PC Paintbrush can run in either 16 or 4 colour mode, but all the school's I've visited hadn't tried the 4 colour mode. If you're printing out in b/w the only advantage of using the 16 colour version are the shades provided by FRIEZE. However, on 4 colour mode (Hi-res) shades are still available and if you are clever you can get an 8-colour palette by adjusting the palette to provide dithered (mixtures) of colours). Another problem is that files between the two resolutions are not compatible. Change the resolution using PCINSTALL on your PBrush disk.)

This was the first ever case I've encountered of a master disk being corrupted, and although a firmware upgrade for the PC186 is not that hard to fit (just needs a bit of time), it goes to show that double or triple coincidences can occur just at that moment when you've changed something.

There are a couple of things to learn from this tale; first, never put a computer back together until you've tested everything. Secondly, the best way to test any system is to replace anything which appears to be faulty with something you know to be good. If the fault moves with the component (in this case the mouse and the disc) then you know they are faulty, rather than your machine

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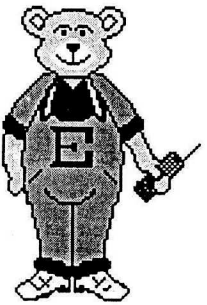

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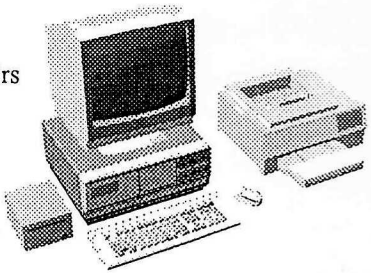

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